ENTOMOLOGISTS generally, as well as those more particularly interested from their geographical position, will be pleased to learn that the long-expected Yorkshire List of Lepidoptera—on which Mr. Geo. T. Porritt, F.L.S., of Huddersfield, has for some time past been engaged—is now completed, and that the MS. is now being set up for the *Transactions of the Yorkshire Naturalists' Union*. Mr. Porritt, who has been assisted by the leading entomologists of the county, and who has also paid attention to the literature of the subject, has written what will probably be regarded as one of the best county catalogues of Lepidoptera extant. The diversity of soil and climate, geological and physical conformation, for which Yorkshire is famous, is once more illustrated by the richness in species which the lepidopterous fauna shows, 1344 out of the 2031 species recognised as British finding places in Mr. Porritt's catalogue.

THE following occurrence is worth notice:—The Weymouth and Channel Islands Steam Packet Company's mail steamer *Aquila* left Weymouth at midnight on Friday for Guernsey and Jersey on her passage across Channel. The weather was calm and clear, and the sea was smooth. When about one hour out the steamer was struck violently by mountainous seas, which sent her on her beam ends and swept her decks from stem to stern. The water immediately flooded the cabins and engine-room, entering through the skylights, the thick glass of which was smashed. As the decks became clear of water, the bulwarks were found to be broken in several places, one of the paddle-boxes was considerably damaged, the iron rail on the bridge was completely twisted, the pump was broken and rendered useless, the skylight of the ladies' cabin was completely gone, and the saloon skylight was smashed to atoms. The cabins were baled out with buckets, while tarpaulins were placed over the skylights for protection. Fives minutes after the waves had struck the steamer the sea became perfectly calm. Several of the crew were knocked about, but none were seriously injured.

AT 10 p.m. on March 27 an earthquake occurred in and around the town of Miskolcz, Hungary. There were two separate shocks, and so distinctly were they felt that in the theatre, where the performance was going on, a panic ensued, the entire audience rising and rushing in terror towards the outlets. Many persons were injured, but, happily, no lives were lost. An earthquake was observed on March 12 in various parts of Italy. Reports now state that it was principally noticed in the Pellice valley, in the Po district, at Gessi, Varcita, Stura, and Coni. The direction of the shocks was from N.E. to S.W. In the plains the shocks were far less severe than in the mountains, where the foundations of the houses were shaken. Nobody, however, was hurt.

AN interesting discovery has been made at St. Pierre Quiberon (department of Morbihan). It consists of a new dólmen, one of those stone monuments of grey antiquity. It contained several entire human skeletons, besides a number of skulls, stone axes, a bronze pin, and some fragments of vessels.

THE large gold Cothenius medal, which the Imperial "Leopoldinisch-Carolinische" German Academy of Naturalists at Halle awards every year, has this time been given to Prof. F. Eilhard Schulze of Graz.

THE Berlin Mining Academy has purchased for the Mineralogical Museum of this Institution a so-called lightning tube or fulgurite, which was recently found near Warmbrunn. It measures nearly 2 metres in length. It is specially interesting, inasmuch as it shows a branch formation, about 30 centimetres from its end, measuring half a metre in length. The fulgurite was found after a severe thunderstorm in a sandhill and in a vertical position.

A BRILLIANT meteor was observed at Carlsruhe on March 5 at 8.9 p.m. It was about twice as bright as Venus at her greatest brilliancy. Its direction was S.S.W. to N.N.E.; it left a trail of yellowish red colour and of several degrees in length. The phenomenon finally disappeared in the constellation of Cassiopeia, developing little cloudlets at its disappearance.

AT Salez (canton of St. Gallen) some sixty bronze hatchets have been found imbedded in the ground only one metre deep. Their age is stated to be at least 2500 years.

THE additions to the Zoological Society's Gardens during the past week include an Arabian Baboon (*Cynocephalus hamadryas* ♀) from Arabia, presented by Mr. F. E. Goodner; a Sharp-tailed Grouse (*Tetrao phasianellus*) from North America, presented by Mr. Henry Nash; two Sea Mice (*Aphrodite aculeata*) from British Seas, presented by Mrs. A. Browning; an Olive Weaver Bird (*Hyphantornis capensis*) from South Africa, presented by Mr. Edward Ling; two Bonnet Monkeys (*Macacus radiatus* ♂ ♀) from India, deposited; a Red-vented Parrot (*Pionus menstruus*) from South America, a Sordid Parrot (*Pionus sordidus*) from Venezuela, purchased; a Long-eared Fox (*Otocyon lalandii*) from South Africa, received on approval; a Sambur Deer (*Cervus aristotelis* ♀), an Axis Deer (*Cervus axis* ♀), born in the Gardens.

OUR ASTRONOMICAL COLUMN

THE GREAT COMET OF 1882.—Herr Stechert has continued his ephemeris of this comet from the elliptical elements by Dr. Kreutz, which still agree pretty nearly with observations. We extract as follows:—

At Berlin, Midnight

		R.A.			Decl.		Log. distance from	
		h.	m.	s.	°	′	Earth.	Sun.
April	9	5	59	32	−8	43·1	0·5973	0·5787
	11	6	0	30	8	29·5		
	13	–	1	30	8	16·5	0·6084	0·5843
	15	–	2	33	8	3·9		
	17	–	3	37	7	51·9	0·6191	0·5898
	19	–	4	43	7	40·4		
	21	–	5	50	7	29·3	0·6294	0·5952
	23	–	6	59	7	18·8		
	25	–	8	10	7	8·7	0·6393	0·6005
	27	–	9	22	6	59·1		
	29	–	10	35	6	50·0	0·6487	0·6057
May	1	6	11	50	−6	41·3		

Assuming the intensity of light = 1, on February 8, when Prof. Schmidt last saw the comet with the naked eye at Athens, the intensity on April 9 will be 0·234, and on April 29, 0·163.

From September 8, the date of the first accurate observation at the Royal Observatory, Cape of Good Hope, to the middle of last month, the comet had described a heliocentric or orbital arc of 339½°; no other comet since the celebrated one of 1680 has passed over so large an arc of its orbit while under observation. Between Kirch's first observation on the morning of November 14, 1680, and the last observation by Sir Isaac Newton on March 19, 1681, that body traversed a heliocentric arc of 345°.

VARIABLE STARS.—Mr. G. Knott has observed three more minima of Ceraski's variable U Cephei. The resulting times of minima are—

			h.	m.			
1883,	March	12,	11	49	G.M.T.	Magnitude	9·4
	,,	22,	11	10	,,	,,	9·45
	April	1,	10	29	,,	,,	9·45

Mr. Knott remarks that the star is not a very easy one to observe, and it is not therefore an easy matter to disentangle errors of observation from real irregularities in the light curve.

On March 31 and April 1 he found the variable star R Coronæ Borealis very visible to the naked eye, and nearly equal to π Coronæ. "It has presumably brightened up further since Schmidt's observations towards the end of last year" (*Ast. Nach.* No. 2491). π Coronæ is a sixth magnitude according to Argelander and Heis. The variability of this star was established by Pigott in 1795, but its fluctuations are exceedingly irregular.

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Schönfeld in his last catalogue gives, as the limits of variation, 5·8m. and 13m. The actual position is in R.A. 15h. 43m. 45s., Decl. + 28° 31′·0. Schmidt found that a star which precedes R Coronæ by 2 seconds, and 7½ minutes N. varies from 11m. to 13·12m. in a period of perhaps 1½–2 months (see *Ast. Nach.* No. 1915).

Bradley 396 has been so discordantly rated in our catalogues that variability appears highly probable, and the period may not be a long one. The estimates are from 4·5m. to 7m. It is Groombridge 580, Fedorenko 473, and B.A.C. 906. The position for 1883·0 is in R.A. 2h. 53m. 40s., Decl. +81° 1′·0.

Prof. Pickering reports that a careful study of the fluctuations of Sawyer's variable by Mr. Chandler shows that it belongs to the Algol class, and has a period of little over 20 hours. A long series of observations of the light curve and successive minima gives 20h. 7m. 41·6s. ± 1·3s.

THE LATE TRANSIT OF VENUS.—Prof. Pickering has published the results of contact observations in the transit of Venus made at the observatory of Harvard College; the times are as follow:—

	h.	m.	s.		
First external contact ...	2	4	32	G.M.T.	by 3 observers.
,, internal ,, ...	2	24	43	,,	by 4 ,,
Last internal ,, ...	7	47	40	,,	by 6 ,,
,, external ,, ...	8	7	52	,,	by 6 ,,

These differ from the times given by the equations of reduction inserted in this column by + 58s., + 11s., + 22s., and − 25s. respectively, a very close accordance, considering that observations of the first external contact are less certain than the others.

GEOGRAPHICAL NOTES

AT a recent meeting of the Geographical Society of Copenhagen, Capt. Irminger in the chair, Dr. Oscar Dickson was present to give an account of the proposed Swedish expedition to Greenland. The chairman referred to Dr. Dickson as the Mæcenas who enabled Nordenskjöld to carry out his ideas, while both had an ardent supporter in King Oscar. Of the Arctic expeditions, which wholly or partly owed their origin to Oscar Dickson, he mentioned the following:—The expedition of 1868 to Spitzbergen was almost entirely paid for by him; the expedition of 1870 to Greenland was entirely paid for by him; the expedition of 1872–73, which wintered at Spitzbergen, was partly paid by him, while the great deficiency subsequently arising was covered by him; the expedition of 1875 to the Yenissei was entirely paid by him; the expedition of 1876 to the same river, by sea and by land, was chiefly paid by him; the *Vega* expedition of 1879–80 was paid to the extent of one-third by him, and if the vessel had not succeeded in rounding Asia he would have borne the entire cost of this expedition; and eventually the cost of the Swedish expedition of 1883 would be borne by him. It should also not be forgotten that, at the time when the despatch of the *Dijmphna* expedition was nearly frustrated for the want of 20,000 kr. (1150*l.*), Oscar Dickson came forward to supply the deficiency, and although it was most generously contributed by Mr. Gamél, every lover of geographical discovery ought to appreciate his noble action. Dr. Oscar Dickson next addressed the meeting. He began by stating that the King of Denmark had sanctioned the new expedition. Nordenskjöld had not desired that the programme of the expedition should be made public too soon, as he was much occupied with preparations for his journey and his duties as a senator, and if his plans should be questioned by *savants*, he would have no time for discussing them. He next referred to the oldest accounts of Greenland, its colonisation from Iceland, and "Esquimauxising" from America. After this, Greenland was for a time forgotten, until the west coast was rediscovered. The speaker then mentioned the achievements of Hans Egede, and the founding of a commerce. The west coast was one of the best known Arctic countries, both geographically and ethnologically; but not so the east coast. In spite of several expeditions and researches, only the southern portion was known. The interior was a *terra incognita*. These tracts were, however, too important to remain unknown. He then referred to the wanderings of Nordenskjöld and Lieut. Jensen on the inland ice. From these expeditions it was impossible to infer that the interior of Greenland was entirely covered with ice, while in the constant advance of the glaciers and their melting off he (the speaker) found a corroboration of this theory. By the geographical appearance of Greenland, and more especially by the circumstance that the country gradually rose in the interior, it was more than probable that the interior was not entirely covered with ice. Even in the temperature and moistness of the air there seemed a proof that the country would answer to its name. In any case the exploration of the interior of this country was most important, and it was for this purpose that the expedition would make its researches. To these belonged the ascertaining of the extent of the drift ice between Cape Farewell and Iceland, the study of the inland ice, the fossil remains, and the cosmic dust in the island. Eventually it was hoped that, while Nordenskjöld made his expedition across the ice, another party of the members would pay a visit to the west coast, where there were some very peculiar blocks of ironstone. The expedition would possess a complete staff of scientific specialists. The expedition had also one more object in view, viz. to settle the question as to where the Österbygd had been. Every one who read without prejudice the oldest accounts could but come to the conclusion that its remains must be found on the east coast. After excursions on the inland ice, it was the intention to attempt to penetrate northwards along the east coast. In May next the expedition would start in a well-equipped steamer, and, if the state of the ice would permit, first land on the east coast; but as this was not expected to be the case the party would land on the west coast, and when the researches here were at an end they would proceed along the east coast in a channel between the land and the drift ice. In September next the expedition would return.

THE changes of level of the Caspian are still a puzzling problem for Caucasian geographers. It is known that the late M. Khanikoff was of opinion that the level of this sea has been rapidly falling during our century. After having been, in 1780, 13 feet above the level of 1852, and 10 feet in 1820, he said, it was only 3·3 feet higher in 1830, and has almost regularly decreased since. Sokoloff maintained that it had risen and fallen at irregular intervals since 1744, but was 10 feet lower in 1830 than in 1780. Lenz admitted that it had fallen about 10 feet during the years 1816 to 1830. In any case, for the benefit of subsequent measurements he made permanent marks at Baku showing the level of the sea in 1830, and since that time measurements of level were carried on at Baku. But their results were unsatisfactory—as it appears from M. Filipoff's paper in the last number of the Caucasian *Izvestia*—and the only sure result is that on May 30, 1853, the level of the Caspian was 2 feet 1·3 inches lower than in March, 1830. In September, 1854, at high water it already had risen 1 foot 6 inches *above* the mark of May 30, 1853. On June 4, 1882, that is, at high water, it was also higher than in 1830 by 10·5 inches, so that it may be admitted, according to M. Filipoff, that since 1830 the level of the Caspian, although subject to fluctuations (such as a rapid rise after 1847), has not sensibly fallen during the last fifty years.

ACCORDING to the recent explorations of M. Yadrintseff, the situation of the aborigines throughout Northern and Middle Siberia is very precarious. The Bakaharians and Tartars, who were formerly a privileged class of merchants, and number at present 43,670 souls in Middle Siberia, are decreasing, and belong to the poorest population of the country. The Voguls in the Government of Tobolsk number 6070, and their increase is insignificant. As to the 23,070 Ostyaks and Samoyedes, they are in the worst imaginable position; the rate of increase is very low, while in other parts they obviously decreasing. They are accustomed now to eat bread, but have no means to provide it in necessary quantities owing to its high price. As to the southern Tartars, who have maintained their pasture lands, they are in a better position; those of Barnaoul and Biysk, who are agriculturists, and those of Kuznetsk, living on trade, are on the increase; and M. Yadrintseff quotes an instance of ten families who have maintained their land and occupy now seven villages, making a total of 1270 souls. The dying out of these aborigines is the more regrettable, as M. Yadrintseff proved by numerous instances that they display a high degree of intelligence, and might adapt themselves to new conditions.

IN the April number of *Petermann's Mittheilungen* there is a full account, by Dr. Rink, of recent Danish researches in Greenland,—on the geography of the interior, the ice-formation and glaciers, geology and mineralogy, botany and archæology; accompanying the paper is a map of the west coast between Godhavn and Pröven, coloured geologically. Baron von Richthofen discusses the value of the copy of "Marco Polo" recently discovered in the royal library of Stockholm.

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